Preventing thrombotic complications in cancer patients is highly relevant above-and-beyond IST. New approaches in cancer patients have been investigated and the hypothesis that strategies to inhibit clotting mechanism may favorably affect malignant disease is gaining interest. Evidence-based strategies are being developed to treat cancer patients with venous thromboembolism. Phenprocoumon (warfarin and derivates) is problematic in cancer patients because of unpredictable responses and variable efficacy. Hull et al. (11) recently reported a multicenter, randomized, open-label clinical trial using objective outcome measures comparing long-term therapeutic low molecular weight heparin subcutaneously to warfarin therapy in cancer patients. Bleeding complications were the same. However, 16% of the warfarin group developed thrombosis recurrence, compared with 7% in the low-molecular-weight heparin group.

We are uncertain how stented cancer patients should be best treated. Five of 6 developed IST despite optimal antiplatelet therapy. Whether or not these patients should receive subcutaneous low molecular weight heparin, as did the cancer patients in the trial by Hull et al. (11), is unknown. We pose the question of how cancer patients will respond to drug-eluting stents. These stents behave differently to endothelial repair. We have not placed such stents in cancer patients. Consideration could also be given to treat such high-risk patients with balloon dilatation alone without stenting. Surveillance studies are necessary to address this important question.

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C. Michael Gross, MD
Maximilian G. Posch, MD
Christian Geier, MD
Heike Olthoff, MD
Jochen Krämer, MD
Ralf Dechend, MD
Rainer Dietz, MD, PhD

***Cemil Özcelik, MD**

*Franz-Volhard Clinic
HELIOS Klinikum Berlin-Buch
Schwanebecker Chaussee 50
13125 Berlin, Germany
E-mail: oezcelik@mdc-berlin.de

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Please note: Drs. Gross and Posch contributed equally to this work.

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Letters to the Editor

Debating About a Registry to Define the Best Invasive Treatment for Obstructive Hypertrophic Cardiomyopathy

Should It Also Include Obstructive Patients Medically Treated?

We have read with great interest the Viewpoint by Olivotto et al. (1) that recently was published in the *Journal*. The authors have convincingly demonstrated that a randomized prospective trial comparing the results of these 2 techniques is not feasible, because it would require the enrollment of more than 30,000 patients with hypertrophic cardiomyopathy. We agree with their conclusion that this issue can only be addressed by a large international multicenter registry.

However, in our opinion, the discussion on the respective advantages of surgical myectomy and alcohol septal ablation should not distract from the crucial and, still controversial, question of which patients are appropriate candidates for the myectomy operation. Indeed, the international guidelines on hypertrophic cardiomyopathy define candidates to myectomy as "both adults and children with obstructive hypertrophic cardiomyopathy and severe drug-refractory symptoms" (2). On the other hand, 2 recent

retrospective studies performed in centers with a particularly large experience with the myectomy operation have shown that survival in patients with obstructive hypertrophic cardiomyopathy and heart failure symptoms who underwent myectomy is similar to that of patients with the nonobstructive form of the disease, and substantially more favorable than that of nonoperated obstructive patients (3,4). Both studies raise the important question of whether young patients with obstructive hypertrophic cardiomyopathy, a marked outflow gradient, and a dilated left atrium should be operated earlier, without waiting for the development of severe symptoms of heart failure unresponsive to medical treatment. On the basis of these recent results, cardiac surgeons with a large experience and very low operative mortality for the myectomy operation are now confronted with the dilemma of whether to operate young patients with outflow obstruction earlier in their clinical course, without waiting for progression to severe heart failure symptoms.

Therefore, we would like to take this opportunity to stress the need for a large international multicenter registry of the clinical course and management of patients with the obstructive form of hypertrophic cardiomyopathy, focused not only on the comparison of the results of myectomy operation versus alcohol septal ablation, but also on the selection of the proper candidates to surgery.

***Paolo Ferrazzi, MD, FETCS**
Michele Triggiani, MD, PhD
Attilio Iacovoni, MD

*Cardiovascular Department and Cardiac Surgery Unit
Ospedali Riuniti di Bergamo
Largo Barozzi 1
24128, Bergamo, Italy
E-mail: pferrazzi@ospedaliriuniti.bergamo.it

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Reply

We are grateful to Dr. Ferrazzi and colleagues for their thoughtful comments and interest in our work (1). The primary issue raised in their letter is indeed an important one; should surgical septal myectomy for obstructive hypertrophic cardiomyopathy (HCM) be offered to patients with less than severe drug-refractory symptoms, instead of waiting for the progression to New York Heart Association (NYHA) functional class III to IV? At this time, however, we believe that there is no compelling evidence to allow for such radical liberalization of the established selection criteria for surgical septal myectomy (or alcohol septal ablation) (2).

For example: 1) Patients with NYHA functional class III to IV symptoms of heart failure improve measurably after myectomy, often achieving functional class I (2–4). Obviously, symptomatic improvement cannot represent a clinical target in NYHA functional class I to II patients. 2) Postoperatively, patients with class III to IV symptoms have a long-term survival benefit equivalent to that of the general population (4). 3) There are few (if any) available data documenting irreversible heart failure despite adequate myectomy, due to an excessive period of NYHA functional class III to IV symptoms. 4) No consistent data support the advantage of myectomy in reducing left atrial size and the propensity for atrial fibrillation (2,5). For example, in the paper by Woo et al. (3), a substantial proportion of operated patients still went on to develop atrial fibrillation during follow-up.

On the other hand, we agree with Dr. Ferrazzi and colleagues that is probably not necessary or advisable to require symptomatic patients with obstructive HCM to prolong decisions regarding operative intervention until they are essentially disabled. Indeed, once symptoms related to obstruction become fixed and unresponsive to conventional pharmacologic treatment, further medical treatment is unlikely to result in clinical improvement equivalent to that expected following myectomy.

Finally, it is tantalizing to consider earlier intervention with surgical myectomy, given the very low operative mortality now reported by major centers (4). Nevertheless, we hesitate to promote myectomy for asymptomatic or mildly symptomatic patients with obstructive HCM, given that open-heart procedures are never without a mortality and morbidity risk, even at particularly experienced centers (2,4,5). Therefore, we welcome the suggestion of expanding the multicenter registry for obstructive HCM that we have proposed, as a tool to identify ideal candidates for septal reduction therapies (1). However, such registry may ultimately prove of limited value in establishing the need for earlier intervention in HCM patients.

***Iacopo Olivotto, MD**
Steve R. Ommen, MD
Martin S. Maron, MD
Franco Cecchi, MD
Barry J. Maron, MD

*Cardiologia San Luca
Referral Center for Cardiomyopathies
Azienda Ospedaliera Universitaria Careggi
Viale Pieraccini 17
Florence, Florence 50132
Italy
E-mail: olivottoi@ao-careggi.toscana.it

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